# EXPENSE MANAGER-OUTLAY

## A Project Report

Submitted by


| | |
|---|---|
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to

**APJ Abdul Kalam Technological University**

*in partial fulfillment of the requirements for the award of the Degree of*

**Bachelor of Technology (B.Tech)**

in

**COMPUTER SCIENCE & ENGINEERING**

Under the guidance of

**MR. SHAIJU PAUL**


JYOTHI ENGINEERING COLLEGE
LEAD KINDLY LIGHT
TET
CREATING TECHNOLOGY
LEADERS OF TOMORROW
ESTD 2002

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

Jyothi Engineering College
NAAC Accredited College with NBA Accredited Programmes*
Approved by AICTE & affiliated to APJ Abdul Kalam Technological University
A CENTRE OF EXCELLENCE IN SCIENCE & TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR
JYOTHI HILLS, VETTIKATTIRI P.O, CHERUTHURUTHY, THRISSUR. PIN-679531 PH : +91- 4884-259000, 274423 FAX : 04884-274777
NBA accredited B.Tech Programmes in Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering valid for the academic years 2016-2022. NBA accredited B.Tech Programme in Civil Engineering valid for the academic years 2019-2022.


**September 2022**

# DECLARATION

We hereby declare that the project report " EXPENSE MANAGER - OUTLAY", submitted for partial fulfillment of the requirements for the award of degree of Bachelor of Technology of the APJ Abdul Kalam Technological University, Kerala is a bonafide work done by us under supervision of MR. SHAIJU PAUL. This submission represents the ideas in our own words and where ideas or words of others have been included, we have adequately and accurately cited and referenced the original sources. We also declare that we have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in this submission. We understand that any violation of the above will be a cause for disciplinary action by the institute and/or the University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been obtained. This report has not been previously used by anybody as a basis for the award of any degree, diploma or similar title of any other University.

| **Name of Students** | **Signature** |
|---|---|
| ABDU ROUF A (JEC19CS002) | |
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| AISWARYA K (JEC19CS009) | |

**Place:**

**Date:**

Jyothi Engineering College

NAAC Accredited college with NBA Accredited programmes

## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

JYOTHI ENGINEERING COLLEGE
LEAD KINDLY LIGHT
TET

CREATING TECHNOLOGY
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ESTD 2002

# CERTIFICATE

This is to certify that the report entitled " **EXPENSE MANAGER - OUTLAY** " submitted by ABDU ROUF A(JEC19CS002) AISHWARYA PRASAD(JEC19CS008) AISWARYA K(JEC19CS009) to the APJ Abdul Kalam Technological University in partial fulfillment of the requirements for the award of the Degree in Bachelor of Technology in **COMPUTER SCIENCE & ENGINEERING** is a bonafide record of the project work carried out by them under my/our guidance and supervision. This report in any form has not been submitted to any other University or Institute for any purpose.

**Mr. Shaiju Paul**
**Assistant Professor**
**Internal Supervisor**

**Dr. Saju P John**
**Professor**
**Head of the Department**

# ACKNOWLEDGEMENT

We take this opportunity to thank everyone who helped us profusely, for the successful completion of our project work. With prayers, we thank **God Almighty** for his grace and blessings, for without his unseen guidance, this project would have remained only in our dreams.

We thank the **Management** of Jyothi Engineering College and our Principal, **Dr. Sunny Joseph Kalayathankal** for providing all the facilities to carry out this project work. We are greatful to the Head of the Department **Dr. Saju P John** for his valuable suggestions and encouragement to carry out this project work.

We would like to express our whole hearted gratitude to the project guide **Mr. Shaiju Paul** for his encouragement, support and guidance in the right direction during the entire project work.

We thank our Project Coordinators **Mr. Anil Antony** & **Mrs. Sajitha.I** for their constant encouragement during the entire project work. We extend our gratefulness to all teaching and non teaching staff members who directly or indirectly involved in the successful completion of this project work.

Finally, We take this opportunity to express our gratitude to the parents for their love, care and support and also to our friends who have been constant sources of support and inspiration for completing this project work.

ABDU ROUF A (JEC19CS002)
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# VISION OF THE INSTITUTE

Creating eminent and ethical leaders through quality professional education with emphasis on holistic excellence.

# MISSION OF THE INSTITUTE

- To emerge as an institution par excellence of global standards by imparting quality Engineering and other professional programmes with state-of-the-art facilities.
- To equip the students with appropriate skills for a meaningful career in the global scenario.
- To inculcate ethical values among students and ignite their passion for holistic excellence through social initiatives.
- To participate in the development of society through technology incubation, entrepreneurship and industry interaction.

# VISION OF THE DEPARTMENT

Creating ethical leaders in the domain of Computational Sciences through quality professional education with a focus on holistic learning and excellence

# MISSION OF THE DEPARTMENT

- To create technically competent and ethically conscious graduates in the field of Computer Science and Engineering by encouraging holistic learning and excellence.
- To prepare students for careers in Industry, Academia and the Government.
- To instill Entrepreneurial Orientation and research motivation among the students of the department.
- To emerge as a leader in education in the region by encouraging teaching, learning, industry and societal connect.

# PROGRAMME EDUCATIONAL OBJECTIVES

**PEO 1:** The graduates shall have sound knowledge of Mathematics, Science, Engineering and Management to be able to offer practical software and hardware solutions for the problems of industry and society at large.

**PEO 2:** The graduates shall be able to establish themselves as practicing professionals, researchers or Entrepreneurs in computer science or allied areas and shall also be able to pursue higher education in reputed institutes.

**PEO 3:** The graduates shall be able to communicate effectively and work in multidisciplinary teams with team spirit demonstrating value driven and ethical leadership.

# PROGRAMME SPECIFIC OUTCOMES

Graduate possess -

**PSO 1:** An ability to apply knowledge of data structures and algorithms appropriate to computational problems.

**PSO 2:** An ability to apply knowledge of operating systems, programming languages, data management, or networking principles to computational assignments.

**PSO 3:** An ability to apply design, development, maintenance or evaluation of software engineering principles in the construction of computer and software systems of varying complexity and quality.

**PSO 4:** An ability to understand concepts involved in modeling and design of computer science applications in a way that demonstrates comprehension of the fundamentals and trade-offs involved in design choices.

# PROGRAMME OUTCOMES

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

# COURSE OUTCOMES

| COs | Description |
|---|---|
| C410.1 | The students will be able to analyse a current topic of professional interest and present it before an audience. |
| C410.2 | Students will be able to identify an engineering problem, analyse it and propose a work plan to solve it. |
| C410.3 | Students will have gained thorough knowledge in design, implementations and execution of Computer science related projects. |
| C410.4 | Students will have attained the practical knowledge of what they learned in theory subjects. |
| C410.5 | Students will become familiar with usage of modern tools. |
| C410.6 | Students will have ability to plan and work in a team. |

# CO MAPPING TO POs

| | POs | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **COs** | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| C410.1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 |
| C410.2 | 2 | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| C410.3 | 3 | 1 | 2 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 3 |
| C410.4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 |
| **Average** | 2.5 | 1.75 | 2.5 | 2 | 2 | 2 | 2.25 | 2.25 | 2.5 | 2.25 | 2.5 | 2.5 |

# CO MAPPING TO PSOs

| | **PSOs** | | | |
|---|---|---|---|---|
| **COs** | PSO1 | PSO2 | PSO3 | PSO4 |
| C410.1 | 3 | 3 | 3 | 3 |
| C410.2 | 3 | 3 | 2 | 3 |
| C410.3 | 2 | 2 | 1 | 3 |
| C410.4 | 3 | 2 | 3 | 1 |
| **Average** | 2.75 | 2.5 | 2.25 | 2.5 |

# ABSTRACT

This is a software that manages daily/monthly expenses that a person makes.this provides a platform to add or edit different categories for which the expenses is made,records expenses and provides budget report with graph.Also the complete list of expenses is provided by which the overall expense,comparison with previous month expenditure could be done

With this project , we will be able to get a better idea where you are spending your money,so you stay in control and achieve your goal.

# CONTENTS

# LIST OF FIGURES

# CHAPTER 1

# INTRODUCTION

## 1.1 Overview

This is done mainly to keep a track on the users' daily expenses to have a control of their monthly expenses. So here comes the relevance of our web application named as "OUTLAY-The Expense Manager" and this system is used to manage the user's daily expenses in a more coherent and manageable way. This application will help us to reduce the manual calculations for their daily expenses and also keep on managing the expenses.With the help of this web app, user can calculate his total expenses per day and these results will stored for unique user. As the traditional methods of budgeting, we need to maintain the Excel sheets, Word Documents, notes, and files for the user daily and monthly expenses. There is no as such full-fledged solution to keep a track of our daily expenses easily.

## 1.2 Objectives

The main objective of this project is to help people in managing their income towards the expenses. Keeping a log in diary is a very monotonous process to avoid that application allows users to maintain a digital automated diary. It helps in mapping income to expenses through pictorial representations by which the user will be manage their budget.

## 1.3 Organization of the Project

The report is organised as follows:

• Chapter 1: Introduction- Gives an introduction to "Management of expenses"

• Chapter 2: Literature Survey- Summarizes the various existing techniques that helped us in achieving the desired result.

• Chapter 3: Methodology- Methods which are used in this project.

• Chapter 4: Results and Discussion- The results of work and discussion

• Chapter 5: Conclusion & Future Scope- The chapter gives a conclusion of the overall work along with the future scope of implementation.

• Chapter 6: References- Includes the references for the project.

# CHAPTER 2

# LITERATURE SURVEY

### 2.0.1 Online Income and Expense Tracker

Published by : S. Chandini, T. Poojitha, D. Ranjith, V.J. Mohammed Akram, M.S. Vani, V. Rajyalakshmi ,UG Student, Department of Computer Science Engineering, Mother Theresa Institute of Engineering Technology, Palamaner, Andhra Pradesh, India.,International Research Journal of Engineering and Technology (IRJET) Volume: 06 Issue: 3 — Mar 2019 This is a web application known as "Online Income and Expense Tracker" which is helpful to manage out income and expense as a daily or periodically or else whenever we want to remind. It also acts as an indicator or reminder example in the fastest world which we can't able to remember what are the things we have to do for the end of month and what are the payments we have to pay for the particular month. Due to some conflict or some other stress we forget some times that what are the income or where the money has to come from or what the payments we have to pay. This application will help to make a note for what or the things we have to do for the end of month. Budgeting is an integral part of the society. Budget Tracking involves recording and analyzing the incomes and expenses of a person or an organization over a particular period of time. Today, since we are living in a hurry up and get it done society, many people are looking forward to efficient ways to budget their time and money. During the recent years, some research has been carried out on household budget. It has been noted that in most cases, budget management is being done mentally and never being put on paper which makes Budget Tracking very difficult.

### 2.0.2 My Expenses

Published by : Vaishnavi Kolhe1, Brishti Basu, Vivek Shah, Ayush Ostwal,Student, Dept. of Computer Engineering, MAEER's MIT Polytechnic Pune, Maharashtra, India ,International Research Journal of Engineering and Technology (IRJET) Volume: 07 Issue: 02 — Feb 2020. Money Tracking application which will keep a track of Income-Expense of a user on a day to day basis. This application keeps a record of your expenses and will give you a category wise distribution of your expenditure. With the help of this application one can track their daily/weekly/monthly expenses. This application will also has a feature which will help you stay on budget. If you exceed that days expense it will give you a notification. Money tracking application will generate report at the end of month to show Income-Expense via a tabular format. We also have added a special feature which will distribute your expenditure in different categories suitable for the user. A pie-chart representation of your category wise expenditure will also be provided.

### 2.0.3 eExpense: A Smart Approach to Track Everyday Expense

Published by : Shahed Anzarus Sabab, Sadman Saumik Islam, Md. Jewel Rana, Monir Hossain Department of Computer Science and Engineering (CSE) Northern University Bangladesh, Daffodil International University Dhaka, Bangladesh 4th International Conference of on Electrical Engineering and Information and Communication Technology, 2018[1] eExpnese is an application that supports Android smartphones. By using this application, users can save their expense by simply scanning the bills or receipt copies. This application extracts the textual information from the receipts and saves the amount and description for further processing. It also monitors user's income by tracking the received SMS's from the user's saving accounts. By calculating income and expense it produces the user's balance in monthly and yearly basis. Overall, this is a smart computerized solution for tracking expense.

### 2.0.4 Income and Expense Tracker

Published by: P. Thanapal*, Mohammed Yaseen Patel, T.P. Lokesh Raj and J. Satheesh Kumar Indian Journal of Science and Technology, Vol 8(S2), 118– 122, January 2015[2] In this project we propose an application known as "Income and Expense Tracker" which is helpful to manage out income and expense as an daily or periodically or else whenever we want to remind. It also act as an indicator or reminder example in the fastest world which we can't able to remember what are the things we have to do for the month end and what are the payments we have to pay for the particular month

# CHAPTER 3

# METHODOLOGY

## 3.1 Existing Systems

- Existing system does not use the smart concept which are used now a days. In existing, we need to maintain the Excel sheets,CSV etc. files for the user daily and monthly expenses. In existing, there is no as such complete solution to keep a track of its daily expenditure easily. To do so a person as to keep a log in a diary or in a computer, also all the calculations needs to be done by the user which may sometimes results in errors leading to losses.

### 3.1.1 Disadvantages of existing systems

- The existing system is not user friendly because data is not maintained efficiently.
- But this project will not have any reminder to remain a person in a specific date, so that is the only drawback in which the remainder is not present.

## 3.2 Problem Statement

To provide a method by which people could track their expenses and manage it.

## 3.3 Proposed System

In the proposed System, User are provided with two options for data entry namely Income and Expense . If you select income or expense you would be provide with its types . This information would be saved onto database by their particular classification. The saved data can later be changed if the user needs to do as such. Altering here means adding description changing wish list updating data etc. User can also view the result. They can also filter to see the required content only.

## 3.4 Requirement Analysis

### 3.4.1 Functional

- Dashboard panel
- Expense planner
- Expense tracker
- Calender
- Category

### 3.4.2 Non Functional

- Usability
- Reliability
- Supportability
- Performance
- Availability

## 3.5 Modules

### 3.5.1 Add income/add expense

This module deals with adding income and expenses. The user has both options available for adding income and expense. But there is a condition if the user hasn't entered the amount yet then the user can't enter expenses. When the user enters any transaction then that transaction will be added in both Spending and Transaction tabs. If the user wants to delete that transaction then the user has to long click the transaction available in the spending tab then that transaction will be deleted from both tabs.

### 3.5.2 Modify Transactions

If the user wants to delete that transaction then the user has to click the transaction available in the spending tab then that transaction will be deleted from both tabs.

### 3.5.3 Filter Transaction view

In the transaction tab, the user can filter the transactions. In the Spinner, users can select the day, month and year and then click the filter button and according to the day, month and year transactions will appear. If the user wants to filter the transactions only on the basis of day, for example, user-selected Monday then all transactions will appear that were made on Monday.

### 3.5.4 Transactions overview as Pie/Bar/Graph

The user has three options available for graphical representation. When the user rotates the device then the pie chart will appear on the screen and also switch is available on the screen when the user will click on the bar chart will appear on the screen and when the user clicks on graph then Graph will appear on the screen.

## 3.6 System requirements and specifications

### 3.6.1 Google Colab

Colaboratory, or "Colab" for short, is a product from Google Research. Colab allows anybody to write and execute arbitrary python code through the browser, and is especially well suited to machine learning, data analysis and education.

### 3.6.2 Python 3.10.0

Python is a dynamic object-oriented programming language that can be used for many kinds of software development. It offers strong support for integration with other languages and tools, comes with extensive standard libraries, and can be learned in a few days. Many Python programmers report substantial productivity gains and feel the language encourages the development of higher quality, more maintainable code.

### 3.6.3 Django v4.0.4

Django is a high-level Python web framework that encourages rapid development and clean, pragmatic design. Built by experienced developers, it takes care of much of the hassle of web development, so you can focus on writing your app without needing to reinvent the wheel. It's free and open source.

### 3.6.4 Jupyter Notebook v4.11

The Jupyter Notebook is an open source web application that you can use to create and share documents that contain live code, equations, visualizations, and text. Jupyter Notebook is maintained by the people at Project Jupyter.

### 3.6.5 Visual Studio Code v1.67

Visual Studio Code is a streamlined code editor with support for development operations like debugging, task running, and version control. It aims to provide just the tools a developer needs for a quick code-build-debug cycle and leaves more complex workflows to fuller featured IDEs, such as Visual Studio IDE.

### 3.6.6 SQLite

SQLite is a C-language library that implements a small, fast, self-contained, high-reliability, full-featured, SQL database engine. SQLite is the most used database engine in the world. SQLite is built into all mobile phones and most computers and comes bundled inside countless other applications that people use every day.

## 3.7 Data Flow Diagram

### 3.7.1 Level 0

This diagram shows the dfd level-0 where we have three components namely user,tracking system and admin.User logins to our system to interact with the unit .The user will be authenticated by the admin and then the user could if successfully logged in could use our tracking system.The admin checks and maintains the system.

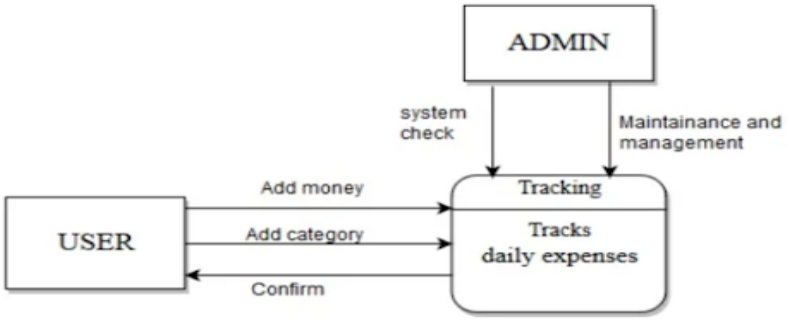



Figure 3.1: Level 0

### 3.7.2 Level 1

This diagram shows the dfd level-1 where we can track data through the process it is involving .The systems expense management is further divided as account profile management and login account management.The user request queries to the system and get response from it.The authentication is checked and access is given.

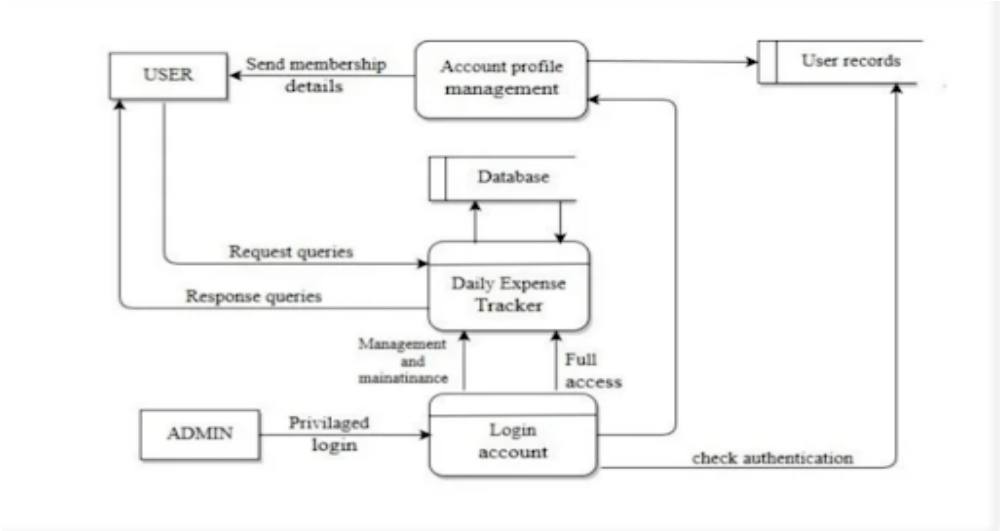



Figure 3.2: Level 1

### 3.7.3 Level 2

This diagram shows the dfd level-2 where user after successful authentication user could add his details and proceed.User could add money details to the system.The tracking system update it to the database then database will retrieve it to tracking system.After retrieving the system the system confirms data to the user.The admin checks and maintains the system.

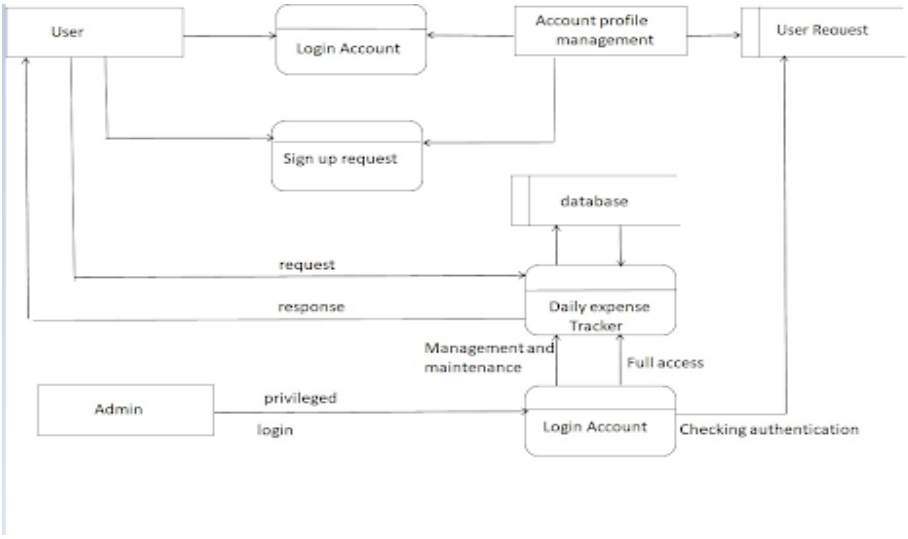



Figure 3.3: Level 2

## 3.8 Use Case Diagram

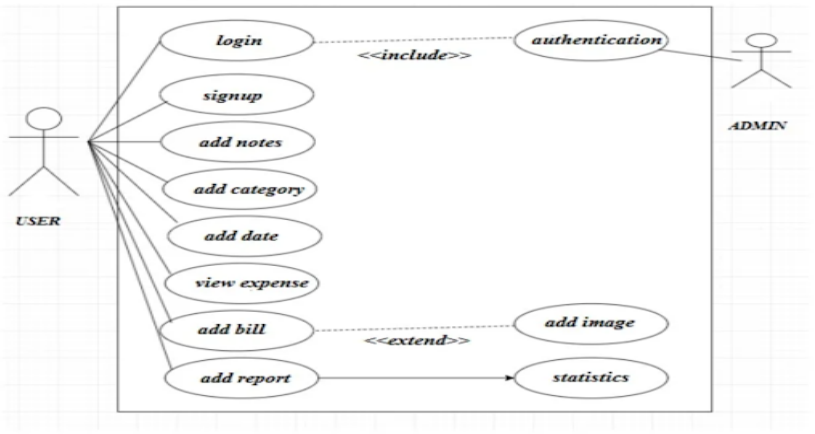



Figure 3.4: Use case diagram

## 3.9 ER Diagram

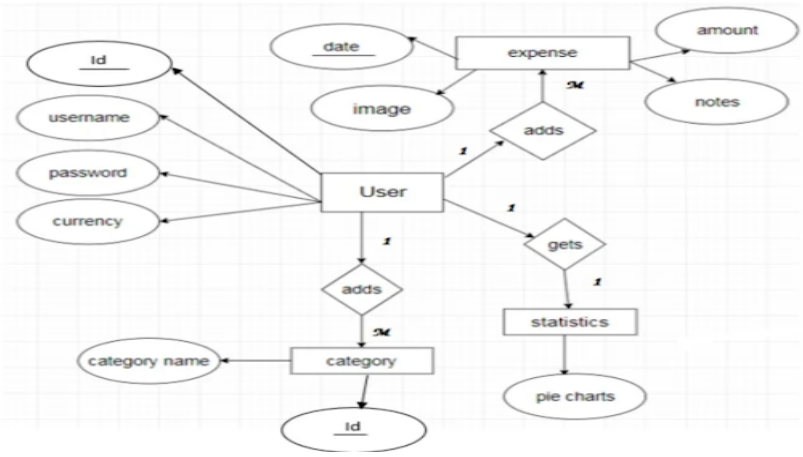



Figure 3.5: ER daigram

## 3.10 Implementation

1. Adding Expense :
   Expense made by user could be added.
2. Adding Income :
   Income of the user could be added.

3. Viewing Expense Pattern :
   The expenses made by the user could be viewed graphically .

4. Filter the expenses:
   The expenses could be viewed within the filtered constraints.

### 3.10.1 Architecture Diagram

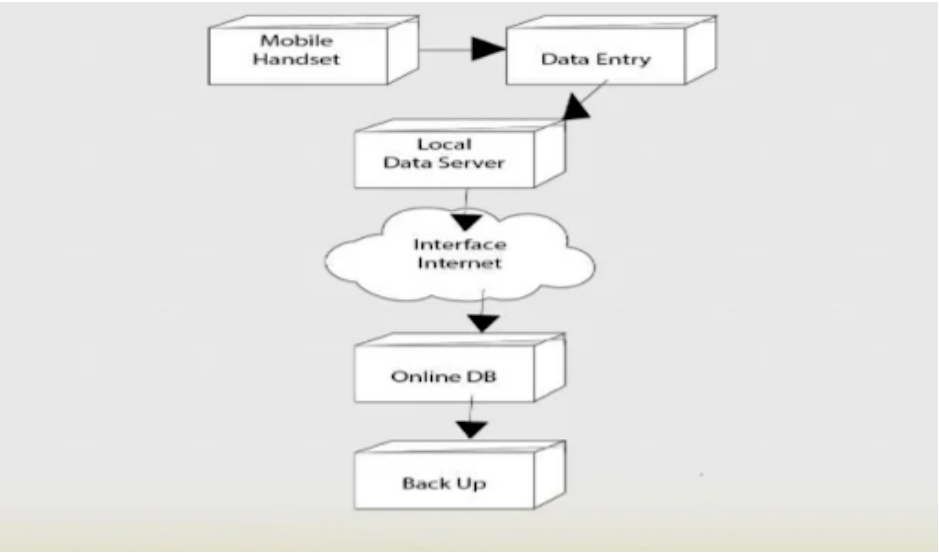



Figure 3.6: Architecture diagram

### 3.10.2 Importing Libraries

- OS

  – The OS module in Python provides functions for interacting with the operating system. OS comes under Python's standard utility modules. This module provides a portable way of using operating system-dependent functionality. The *os* and *os.path* modules include many functions to interact with the file system..

- Pathlib
  - Pathlib module in Python provides various classes representing file system paths with semantics appropriate for different operating systems. This module comes under Python's standard utility modules. Path classes in Pathlib module are divided into pure paths and concrete paths.

### 3.10.3 UI

UI is created using HTML and CSS in a Django framework.
User interface simplifies the entire model for the user. Helps the user to use the entire system without knowing how it works.

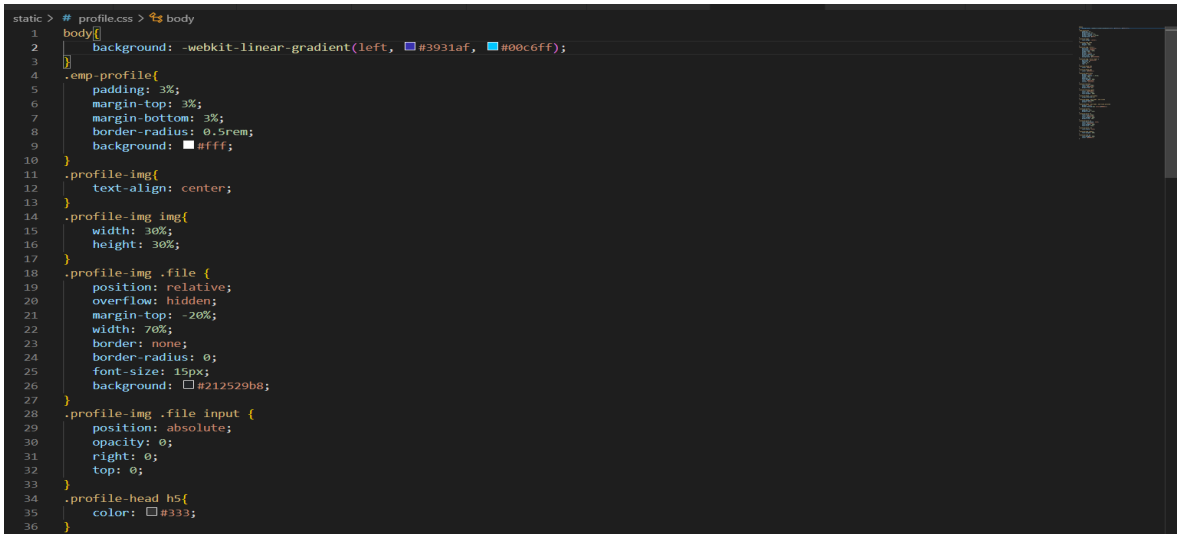



Figure 3.7: CSS code

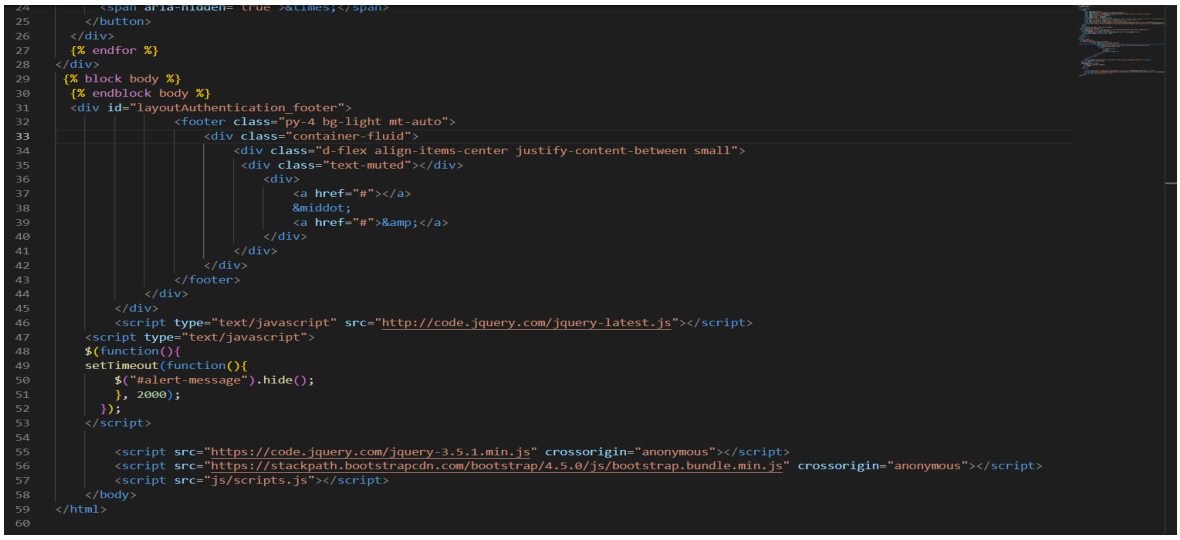
```css
.profile-head .nav-tabs{
    margin-bottom:5%;
}
.profile-head .nav-tabs .nav-link{
    font-weight:600;
    border: none;
}
.profile-head .nav-tabs .nav-link.active{
    border: none;
    border-bottom:2px solid #0062cc;
}
.profile-work{
    padding: 14%;
    margin-top: -15%;
}
.profile-work p{
    font-size: 12px;
    color: #818182;
    font-weight: 600;
    margin-top: 10%;
}
.profile-work a{
    text-decoration: none;
    color: #495057;
    font-weight: 600;
    font-size: 14px;
}
.profile-work ul{
    list-style: none;
}
.profile-tab label{
    font-weight: 600;
}
.profile-tab p{
    font-weight: 600;
    color: #0062cc;
}
```

Figure 3.8: CSS code

```
plates > <> base.html
{%  load static %}
<!DOCTYPE html>

<html lang="en">
    <head>
        <meta charset="utf-8" />
        <meta http-equiv="X-UA-Compatible" content="IE=edge" />
        <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no" />
        <meta name="description" content="" />
        <meta name="author" content="" />
        <title>Page Title - SB Admin</title>
        {% comment %} <link rel="stylesheet" type="text/css" href="{% static 'styles.css' %}"> {% endcomment %}
        <link rel="stylesheet" type="text/css" href="{% static 'login1.css' %}">
        <link rel="preconnect" href="https://fonts.gstatic.com">
        <link href="https://fonts.googleapis.com/css2?family=Big+Shoulders+Stencil+Text:wght@700&display=swap" rel="stylesheet">
        <script src="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.13.0/js/all.min.js" crossorigin="anonymous"></script>
    </head>
    <body>
    <div class="messages" id="alert-message">
  {% for message in messages %}
  <div class="alert alert-{{ message.tags }} mb-0 alert-dismissible fade show" role="alert">
    <strong>Message :</strong>{{ message }}
    <button type="button" class="close" data-dismiss="alert" aria-label="Close">
      <span aria-hidden="true">&times;</span>
    </button>
  </div>
  {% endfor %}
</div>
 {% block body %}
 {% endblock body %}
 <div id="layoutAuthentication_footer">
                <footer class="py-4 bg-light mt-auto">
                    <div class="container-fluid">
                        <div class="d-flex align-items-center justify-content-between small">
                            <div class="text-muted"></div>
                            <div>
                                <a href="#"></a>
```

Figure 3.9: HTML code



```
        <span aria-hidden="true">&times;</span>
      </button>
    </div>
    {% endfor %}
  </div>
  {% block body %}
    {% endblock body %}
    <div id="layoutAuthentication_footer">
                <footer class="py-4 bg-light mt-auto">
                    <div class="container-fluid">
                        <div class="d-flex align-items-center justify-content-between small">
                        <div class="text-muted"></div>
                            <div>
                                <a href="#"></a>
                                &middot;
                                <a href="#">&amp;</a>
                            </div>
                        </div>
                    </div>
                </footer>
            </div>
        </div>
        <script type="text/javascript" src="http://code.jquery.com/jquery-latest.js"></script>
      <script type="text/javascript">
      $(function(){
      setTimeout(function(){
          $("#alert-message").hide();
          }, 2000);
        });
      </script>

          <script src="https://code.jquery.com/jquery-3.5.1.min.js" crossorigin="anonymous"></script>
          <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/js/bootstrap.bundle.min.js" crossorigin="anonymous"></script>
          <script src="js/scripts.js"></script>
      </body>
  </html>
```

Figure 3.10: HTML code

```
'use strict';
const fs = require('fs');
const upath = require('upath');
const pug = require('pug');
const sh = require('shelljs');
const prettier = require('prettier');

module.exports = function renderPug(filePath) {
    const destPath = filePath.replace(/src\/pug\/\pages/, 'dist').replace(/\.pug$/, '.html');
    const srcPath = upath.resolve(upath.dirname(__filename), '../src');

    console.log(`### INFO: Rendering ${filePath} to ${destPath}`);
    const html = pug.renderFile(filePath, {
        doctype: 'html',
        filename: filePath,
        basedir: srcPath
    });

    const destPathDirname = upath.dirname(destPath);
    if (!sh.test('-e', destPathDirname)) {
        sh.mkdir('-p', destPathDirname);
    }

    const prettified = prettier.format(html, {
        printWidth: 1000,
        tabWidth: 4,
        singleQuote: true,
        proseWrap: 'preserve',
        endOfLine: 'lf',
        parser: 'html',
        htmlWhitespaceSensitivity: 'ignore'
    });

    fs.writeFileSync(destPath, prettified);
};
```

Figure 3.11: Javascript code

# CHAPTER 4

# RESULTS & DISCUSSION

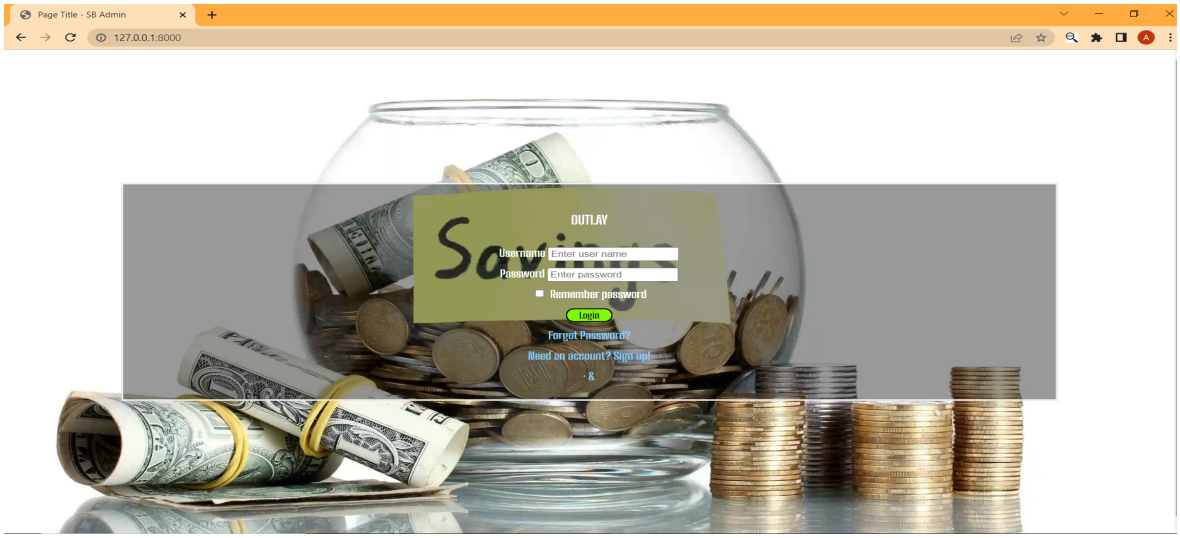



Figure 4.1: Login Page

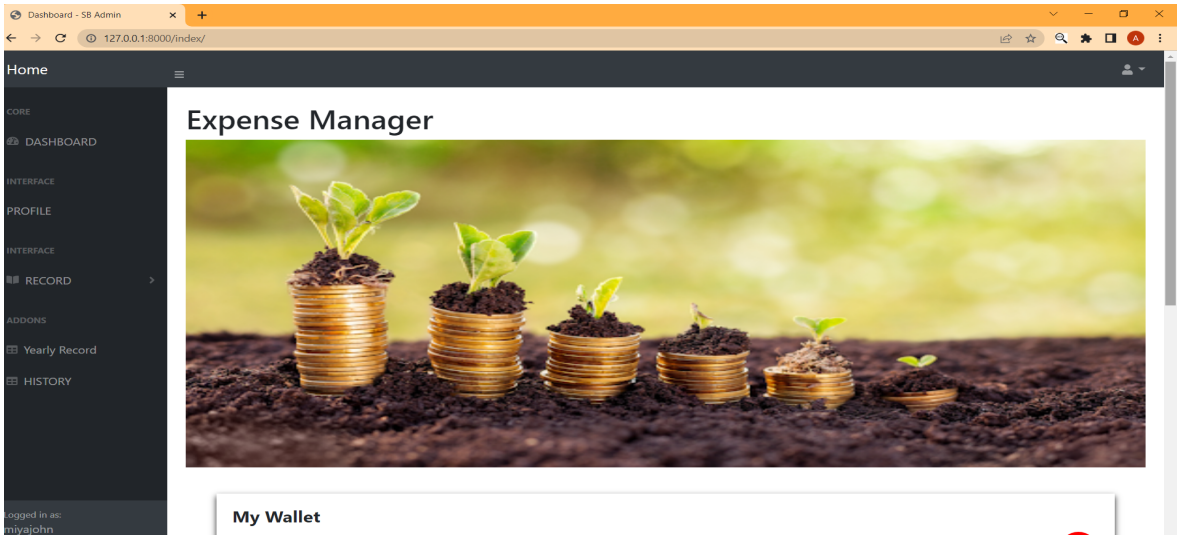



Figure 4.2: Home Page

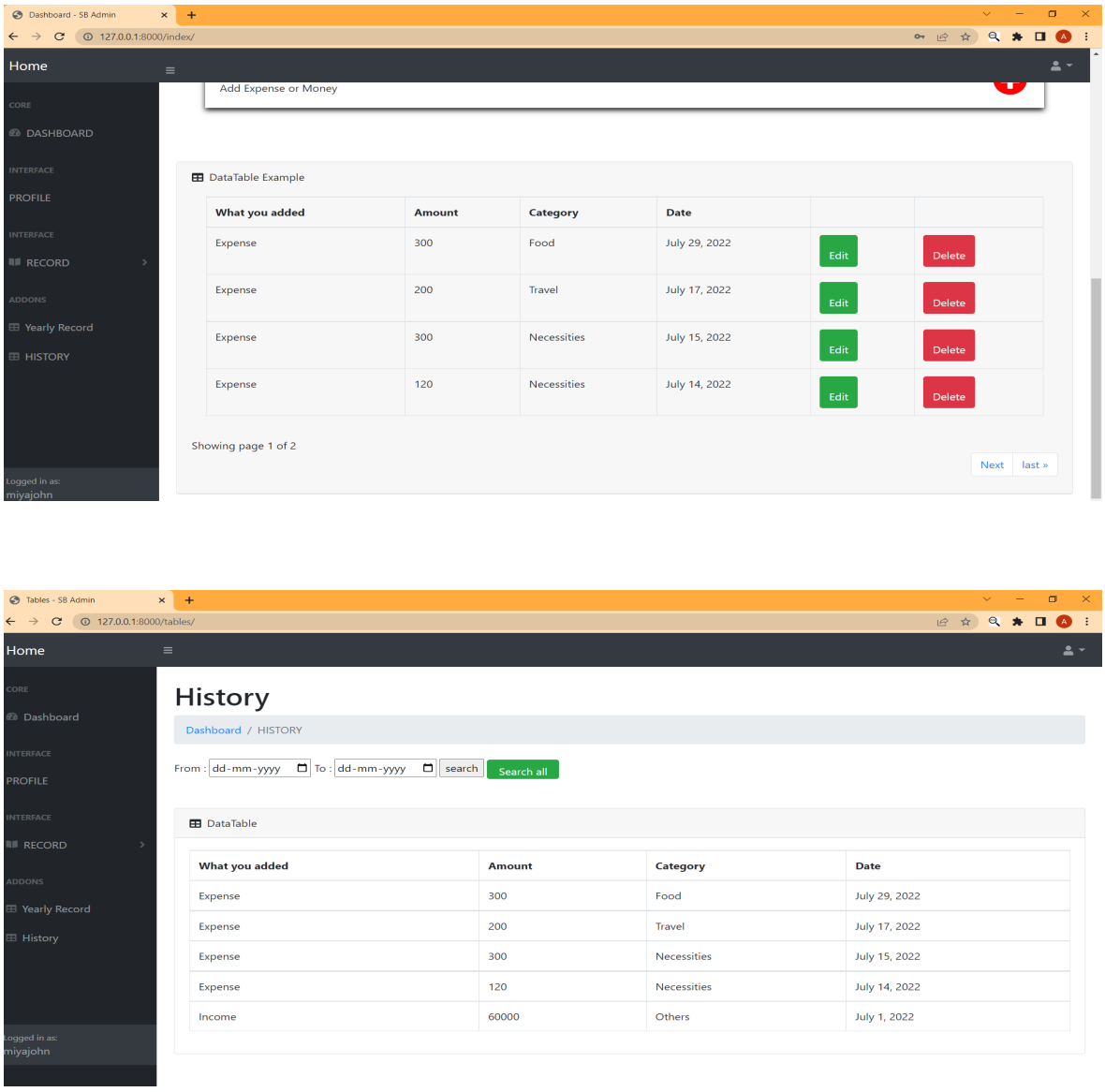



Figure 4.3: History

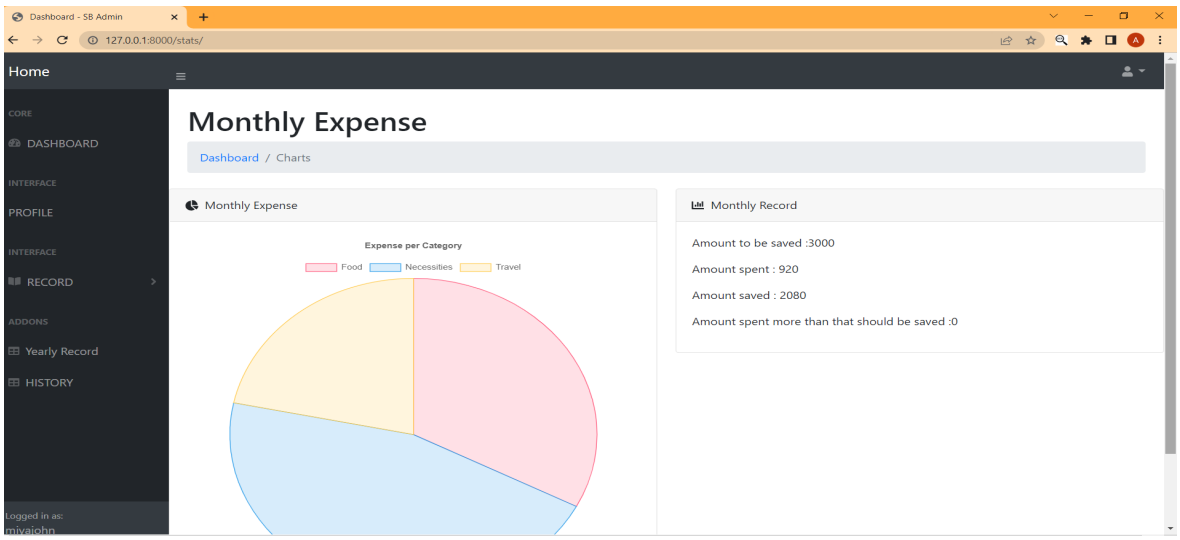



Figure 4.4: Visualising Record

# CHAPTER 5

# CONCLUSION & FUTURE SCOPE

## 5.1 Conclusion

Monitoring your everyday expenses can set aside you cash, yet it can likewise help you set your monetary objectives for what's to come. On the off chance that you know precisely where your sum is going much of a stretch see where a few reductions and bargains can be made. Expense Tracker project is for keeping our day-to-day expenditures will helps us to keep record of our money daily. The project what we have created is work more proficient than the other income and expense tracker. The project effectively keeps away from the manual figuring for trying not to ascertain the pay and cost each month. It's a user-friendly application

In short,the main reason behind this project is that you could track your expenses "to identify and eliminate wasteful spending habits in your financial life".

Moreover consistently tracking your expenses will help you maintain control of your finances and promote better financial habits like saving and investing .

## 5.2 Future Scope

It will have various options to keep record (for example Food, Travelling Fuel, Salary etc.) Automatically it will keep on sending notifications for our daily expenditure.d things.The user could define their own categories for expense type like food, clothing, rent and bills where they have to enter the money that has been spend and likewise can add some data in extra data to indicate the expense.Better budget management options will be suggested to the user based on their requirements.

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